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The Influence of Observers of the Same Race and a Racially Mixed Audienceon Level of Aspiration and Gross Motor Performance of College Males.

Edmond A. Dugas
Louisiana State University and Agricultural & Mechanical College

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THE INFLUENCE OF OBSERVERS OF THE SAME RACE AND A RACIALLY MIXED AUDIENCE ON LEVEL OF ASPIRATION AND GROSS MOTOR PERFORMANCE OF COLLEGE MALES

A Dissertation

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Edmond A. Dugas
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M.Ed., University of Southwestern Louisiana, 1963
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For their encouragement, understanding and sacrifices, this study is dedicated to my family - Marilyn, Donna, Paul, Lesley and John.

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ABSTRACT

The purpose of the study was to determine the influence of observers of the same race and a racially mixed audience on level of aspiration and gross motor performance of college males.

The study was conducted at the University of Southwestern Louisiana, Lafayette, Louisiana, during the Spring semester of 1970. Fifty-seven Caucasian and fifty-seven Negro undergraduate male students voluntarily participated in the study.

Three performance scores and two aspiration scores were obtained for each subject in the presence of nine other subjects and one tester of his own race or in the presence of a Mixed Group of twelve to fourteen subjects, in which five Caucasian and five Negro subjects were tested by one Caucasian and one Negro tester.

The two motor tasks selected for this study were a measure of striking power and the bar hang. Subjects were advised that the purpose of the testing was to establish norms in striking power and the bar hang.

Subjects performed the prescribed motor tasks and the tester verbally informed each subject and the entire group of the scores made on each test. Each subject was requested to verbally indicate the expected score for his next performance in numerical deviation from his first performance. The subject performed and was again asked to indicate his prediction for the third trial in numerical deviation

from his second performance. The second indication by the subject was followed by the third performance. Three performance scores and two aspiration scores for striking power, along with first performance score and first aspiration score for the bar hang, were obtained during the first testing period. The second performance score, second aspiration score and third performance score for the bar hang were obtained during the second testing period.

The second aspiration discrepancy score, derived by dividing the second performance score into the second aspiration score and multiplying that quotient by 100, was used to determine level of aspiration. Second performance score and second aspiration score were used to determine the relationship between performance and aspiration.

The study was completed with thirty-eight subjects in each group, Caucasian, Negro and Mixed. The Mixed Group was comprised of nineteen Caucasian and nineteen Negro subjects.

Analyses of variance were employed to determine whether there were significant differences in aspiration discrepancy scores and in performance scores among the three groups. The Pearson Product-Moment method of correlation was utilized to determine the relationship between performance and aspiration for each group on both motor tasks.

The findings of the study were as follows:

1. No significant differences were found between the aspiration discrepancy scores of the Caucasian, Negro and Mixed Groups when performing a measure of striking power and the bar hang.

2. No significant differences were found between the performance scores of the Caucasian, Negro and Mixed Groups when performing a measure of striking power and the bar hang.
3. When the second performance scores and second aspiration scores for striking power and the bar hang were correlated, a significant positive relationship was found in each group and in the total group.

Within the limits of this study the following conclusions were made:

1. College males are not influenced by the racial composition of their test group to differ in their aspirations and performance when performing gross motor tasks.
2. There is a highly significant positive relationship between a person's ability to perform a motor task and his ability to predict his score on the next trial of that task.

CHAPTER I

INTRODUCTION

As a basic force in human behavior the importance of aspiration is noticed every day in the accomplishments of individuals who, driven by their own desires, have overcome seemingly impossible odds to reach a self-established goal. An excellent example of this is the case of Tom Demsey of the 1969-70 New Orleans Saints Football Team, who although classified by most people as "physically handicapped," performs with the best in professional football. Tom Demsey was selected as kicker on the East Squad for the 1970 National Football League All-Star Game, the Pro Bowl.

The concept of level of aspiration is an important one to educators, since teachers have the responsibility of selecting and planning experiences for students. Concerning this responsibility, Muss stated, "A teacher will never succeed in giving proper guidance to a child if he doesn't learn to understand the psychological world in which that individual child lives."[1]

Included among needs of the child is one which is very important to the concept of level of aspiration, the need to experience success. Success produces confidence and a desire to go on, motivation to try again and a searching for new and more difficult tasks. An understanding of the level of aspiration should be of great aid to educators

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[1]N. L. Muss, Psychology: The Fundamentals of Human Adjustment (Boston: Houghton-Mifflin, 1956), p. 56.

as they select experiences which will be proper for fostering success.

Although the limits of one's performance in any motor task are influenced by psycho-physical conditions and mechanical skills, these do not appear to be the limiting factors in a maximum effort to perform. Indications are that this performance is also greatly affected by the motives at work within an individual as he performs in any given situation. Drury stated that an individual's ability to perform is dependent upon the physiological condition of the individual, his mechanical skill and his desire to perform well.[2]

A great amount of research has been completed concerning the ability to perform as affected by physiological condition and mechanical skill; however, little research was found concerning desire to perform well. When maximum physical performance is attempted the influence of psychological factors is unknown.

Ikai and Steinhaus stated:

> Physiologic factors set the relatively fixed and outermost limits, psychological factors, the more proximate ones. In this sense it is appropriate to speak of a physiologic and psychologic limit. Capacity is always the undetermined measure of the former. Performance is always limited by the latter.[3]

Consequently, during physical performance psychological rather than physiological factors may determine the limits of performance.

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[2]Francis A. Drury, "The Improvement of Physical Performance" (unpublished paper, Louisiana State University, Baton Rouge, 1965), p.1.

[3]Mishio Ikai and Arthur H. Steinhaus, "Some Factors Modifying the Expression of Human Strength," Journal of Applied Physiology, XVI (January, 1961), 157.

Observers of physical performances are constantly questioning the influence of the physiological and psychological factors. When observing current athletic performances in the United States, it is impressive to witness the increasingly large number of outstanding Negro athletes. In regard to the large number of highly-skilled Negro performers, Jordan stated:

> To spectators of college and professional football, basketball, baseball, and track, it is obvious that Negro athletes are represented in percentages well above their population proportion of approximately twelve per cent. Part of the reason for this is probably based on social opportunity and economic limitation. However, data collected over the past half century seem to delineate certain significant biological variances between the Negro and White athlete.[4]

The U. S. News and World Report claimed that sports have become the "one field in which Negroes compete directly against Whites - and win."[5] Based on 1967 figures, Negro players outnumber Caucasians in the National Basketball Association. More than one quarter of the players in the National Football League are Negroes. In baseball's major leagues, one third of the players are Negroes.[6] Further, many of the current world track records are held by Negro athletes. Smith reported that in the Tokyo Olympics, Negroes comprised the following

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[4]James Jordan, "Physiological and Anthropometrical Comparisons of Negroes and Whites," Journal of Health, Physical Education and Recreation, XL (November-December, 1969), 93.

[5]"Where Negroes Have 'Struck It Rich'," U. S. News and World Report, LXIII (December 11, 1967), 71.

[6]Ibid.

portions of the United States team: (1) eighteen of the sixty-seven positions on the men's track-and-field team, (2) fifteen of the twenty participants in women's track and field, (3) nine of the ten-man boxing squad, and (4) five of the twelve basketball positions.[7]

After reviewing the Olympic participants with an anthropological focus, Smith concluded that most observers are "inclined to attribute the apparent domination of certain athletic events by certain races to cultural and sociological factors, such as differences in interest, motivation, tradition, and opportunity."[8]

Regardless of the reasons for the athletic performances of the Negro athletes, possibly motivation was one of the important factors in the phenomenon. Aspiration level, one aspect of motivation at work within the individual, serves as an operational goal, which is conditioned by previous successes or failures in that particular motor performance. Frank, Price, Gardner, Smith, and Starbuck indicated that level of aspiration is a goal for performance which serves as the

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[7]Marshall Smith, "Giving the Olympics an Anthropological Once-Over," Life, LVII (October 23, 1964), 81.

[8]Ibid.

reference point for feelings of success or failure.[9,10,11,12,13]

Cratty stated that "aspiration level relates to one's feelings about oneself in implied competition with some group, real or imagined, that is usually a subculture composed of the performer's peers."[14] Consequently, he feels that one's level of aspiration has definite social implications and exerts a significant influence on motor performance.

Since physical education students consciously or unconsciously establish levels of aspiration prior to performance, physical educators should have more knowledge concerning this concept. Further, segregated public schools are rapidly disappearing and more knowledge needs to be acquired concerning how the various races aspire under different conditions.

Few studies have been conducted in physical education dealing

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[9]Jerome D. Frank, "Individual Differences in Certain Aspects of the Level of Aspiration," American Journal of Psychology, XLVII (January, 1935), 119.

[10]Nanette Price, "The Relationship Between the Level of Aspiration and Performance in Selected Motor Tasks" (microcarded Master's thesis, University of North Carolina Women's College, Greensboro, 1960), p. 4.

[11]John Gardner, "The Use of the Term 'Level of Aspiration'," Psychological Review, XLVII (January, 1940), 66.

[12]Carnie H. Smith, "Influence of Athletic Success and Failure on the Level of Aspiration," Research Quarterly, XX (May, 1949), 196-208.

[13]William H. Starbuck, "Level of Aspiration," Psychological Review, LXX (January, 1963), 51.

[14]Bryant J. Cratty, Social Dimensions of Physical Activity (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967), p. 19.

primarily with the level of aspiration. Cratty pointed out that a critical shortage of research in physical education concerned with level of aspiration exists when he stated: "Research relating aspiration level and self-estimations of performance to motor ability has also been neglected by teacher educators in physical education."[15]

At the time of this proposed investigation there were only nineteen reported studies relating to level of aspiration in the area of physical education. No study was found concerning the influence of observers of the same race and a racially mixed audience upon the level of aspiration in the physical education literature. It appeared that this void in our knowledge of level of aspiration constituted a need to further investigate the phenomenon.

STATEMENT OF THE PROBLEM

Is a significant influence exerted by observers of the same race and a racially mixed audience on level of aspiration and gross motor performance of college males?

PURPOSE OF THE STUDY

The purpose of the study was to determine the influence of observers of the same race and a racially mixed audience on level of aspiration and gross motor performance of college males. A secondary purpose of the study was to determine the relationship between a

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[15] Ibid., p. vii.

person's ability to perform a gross motor task and his ability to predict his score on the next trial of that task.

DEFINITION OF TERMS

Several definitions and suggested meanings of terms may be found in the literature; however, the definitions of terms which follow are preferred by the investigator for this study.

Level of Aspiration. Level of aspiration was defined as "the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach."[16] In this study level of aspiration was determined by the aspiration discrepancy score.

Aspiration discrepancy score. Aspiration discrepancy was assessed in accordance with the method used by Stafford. In this method, the second performance score was divided into the second aspiration score. The quotient derived was multiplied by 100 and recorded as a percentage.[17]

Motor task. Motor task was defined as a physical undertaking, imposed on the subject by the researcher, which required varying degrees of effort and skill. The motor tasks used in the study were a measure of striking power and the bar hang.

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[16]Frank, loc. cit.

[17]Beverly Louise Stafford, "The Effects of Age and Sex on the Level of Aspiration" (unpublished Doctoral dissertation, Louisiana State University, Baton Rouge, 1969), p. 8.

Performance. Performance was defined as a "one-attempt phenomenon influenced by such short-term variables as motivation, fatigue, and nutritive state."[18] Each subject had a first, second, and third performance score for each motor task.

DELIMITATIONS OF THE STUDY

The study was delimited to fifty-seven Caucasian and fifty-seven Negro subjects enrolled at the University of Southwestern Louisiana, Lafayette, Louisiana.

The design of this study restricted its efforts to two motor tasks, a measure of striking power and the bar hang. Each task was limited to two aspiration scores and three performance scores. Audience sizes were restricted to ten members for the segregated groups and fourteen members for the mixed groups.

LIMITATIONS OF THE STUDY

The measurement of the subject's level of aspiration was limited to the data obtained from the subject through the aspiration scores and performance scores for the two motor tasks. Another limitation might be that all the performance scores were not obtained on the same day, but on two separate testing periods approximately forty-seven hours apart. The formal testing atmosphere may have affected the elicitation of the aspiration scores.

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[18] Bryant J. Cratty, Movement Behavior and Motor Learning (Philadelphia: Lea and Febiger, 1964), p. 216.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

The literature reviewed was divided into three sections. These sections included studies related to: (1) Development of the Concept of Level of Aspiration; (2) Influences Affecting Level of Aspiration; and (3) Level of Aspiration in Physical Education.

DEVELOPMENT OF THE CONCEPT OF LEVEL OF ASPIRATION

Translated from German to English, "Anspruchsniveau" means "level of aspiration." Gould stated that the term was originated by Dembo, one of Kurt Lewin's students, in the late 1920's during an investigation of anger. Dembo's experiments employed frustration to invoke anger by requiring the subjects to perform tasks that were extremely difficult or impossible. Although it was not the initial purpose of her investigation, it was recognized by the researcher that when a required goal was too difficult, subjects would set an intermediate goal which was easier than, but a step toward, the required goal. The intermediate goal was referred to by Dembo as the momentary level of aspiration.[1]

Hoppe published the first major experimental study on the level of aspiration and defined the term level of aspiration in the following

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[1]Rosalind Gould, "An Experimental Analysis of Level of Aspiration," Genetic Psychology Monographs, XXI (No. 1) (February, 1939), 1-115.

manner:

> The subject...always undertakes the task with certain demands (Anspruchen), which can change in the course of the activity. The totality of these constantly shifting, now indefinite, now precise, expectations, goal-setting or demands in connection with one's own future performance, we shall term the level of aspiration of the subject.[2]

The study was concerned with the effects of success and failure on level of aspiration. In regard to this Hoppe stated, "so essential to the concept of level of aspiration is its relation to success and failure, that this may well be included as part of the definition."[3] Adult subjects performed simple motor and intellectual tasks, such as solving puzzles. Each subject was secretly observed during one of the performance trials by the researcher. A personal interview with the subject followed the completion of each task. It was concluded that when the subjects reached their goals a feeling of success was experienced, and when the goals were not attained a feeling of failure resulted. Subjects tended to raise their level of aspiration when their performance equaled or surpassed their aspiration level and lower it when the performance failed to reach their level of aspiration.[4]

While Hoppe's evaluation of level of aspiration behavior was qualitative in nature, Frank attempted to provide a quantitative method of assessing level of aspiration. Utilizing the quantitative

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[2]Ferdinand Hoppe, "Erfolg Und Misserfold," Psychologische Forschung, XIV (October, 1930), 10.

[3]Ibid., p. 11.

[4]Ibid., pp. 1-63.

method, subjects were informed of their performance scores from the preceeding trial and were asked to indicate how well they intended to do on the next trial.[5] The quantitative method of measuring level of aspiration compelled Frank to redefine level of aspiration in the following manner:

> The term level of aspiration . . . is defined as the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach.[6]

While developing his definition of level of aspiration, Frank advocated the hypothesis that the average difference between estimates on future performance and level of past performance of the same task depended upon the relative strength of three basic needs. These needs are: (1) the need to keep the level of aspiration as high as possible regardless of the level of performance; (2) the need to make the level of aspiration approximate the level of future performance as closely as possible; and (3) the need to avoid failure where failure is defined as a level of performance below the level of aspiration.[7]

Frank found that the involvement of the ego-level of an individual in a task was responsible for the size of the difference between the average level of aspiration and the median level of past performance. The need to avoid failure or the need to keep the level of

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[5]Jerome D. Frank, "Individual Differences in Certain Aspects of the Level of Aspiration," American Journal of Psychology, XLVII (January, 1935), 119-128.

[6]Ibid., p. 119.

[7]Ibid., pp. 119-120.

aspiration high was strengthened by the ego-level. The fear of failure was found to dominate ego-level as a result of an individual's desire to conceal involvement in a task. This led to the over-compensation of the need to keep the level of aspiration high.[8]

Frank investigated the behavior of level of aspiration in one task as a function of performance in another task. A spatial relations task, a logic word relations task, and a peg board design task were used to measure the levels of aspiration of eight college subjects. The findings of this study revealed that changes in level of performance in one task affected the magnitude of the level of aspiration in another task. The degree of this effect depended to a great extent on the objective similarity of the two tasks. Frank concluded that level of aspiration represented an objective estimate of the future levels of performance on the basis of past levels of performance. It was further concluded that level of aspiration remained a means of protecting the ego-level when ego was involved in the task.[9]

According to Gardner, the concept of level of aspiration was first introduced around 1930 by Lewin and his students, but gained little attention in the research literature until 1935 with the

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[8]Jerome D. Frank, "Some Psychological Determinants of Level of Aspiration," American Journal of Psychology, XLVII (January, 1935), 285-293.

[9]Jerome D. Frank, "The Influence of the Level of Performance in One Task on the Level of Aspiration in Another," Journal of Experimental Psychology, XVIII (April, 1935), 159-171.

appearance of Lewin's Dynamic Theory of Personality.[10]

Lewin and his students were chiefly interested in the phenomenon as it contributed to and was affected by success and failure. In general, they found that success tended to raise the aspiration level and failure to depress it. Lewin found that continued successes and failures may produce feelings of inferiority and superiority which, in turn, may act prejudicially in the determination of conduct and possibly later, achievement.[11]

In 1944, Lewin, Dembo, Festinger, and Sears stated that level of aspiration studies had investigated the following aspects of the phenomenon: (1) those involved with generality of level of aspiration; (2) those involved with patterns of level of aspiration behavior; and (3) those involved with the relationship of aspiration responses to personality traits.[12]

INFLUENCES AFFECTING LEVEL OF ASPIRATION

Twelve studies concerning level of aspiration were reviewed which have some bearing on this investigation. The studies are

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[10]John W. Gardner, "The Use of the Term 'Level of Aspiration'," Psychological Review, XLVII (January, 1940), 59, citing Kurt Lewin, A Dynamic Theory of Personality (New York: McGraw-Hill Book Company, Incorporated, 1935).

[11]Kurt Lewin, A Dynamic Theory of Personality (New York: McGraw-Hill Book Company, Incorporated, 1935), pp. 100-102, 250-260.

[12]Kurt Lewin, T. Dembo, L. Festinger, and P. S. Sears, Personality and the Behavior Disorders (New York: The Ronald Press Company, 1944), pp. 333-378.

reported under the following headings: (1) Influence on One's Own Group on Level of Aspiration; (2) Influence of Other Groups on Level of Aspiration; and (3) Influence of Race on Level of Aspiration.

Influence of One's Own Group on Level of Aspiration

Anderson and Brandt used fifth grade children to study the influence of one's own group on level of aspiration. Their findings revealed that subjects who found themselves performing above the mean of the group tended to have a negative discrepancy score. Those subjects who found themselves near the mean of the group tended to have a slight positive discrepancy score. Subjects who were below the mean of the group tended to have a very large positive discrepancy score. It was concluded that an individual aspired toward the mean performance level of his group.[13]

Hilgard, Sait, and Magaret found that level of aspiration was affected by relative standing of a subject in an experimental social group. The findings revealed that subjects ranking superior in relation to their social group tended to set levels of aspiration too low, while those subjects ranking inferior tended to set levels of aspiration too high.[14]

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[13] H. H. Anderson and H. F. Brandt, "A Study of Motivation, Involving Self-Announced Goals of Fifth Grade Children, and the Concept of Level of Aspiration," Journal of Social Psychology, X (May, 1939), 209-232.

[14] E. R. Hilgard, E. M. Sait, and G. A. Magaret, "Level of Aspiration as Affected by Relative Standing in an Experimental Social Group," Journal of Experimental Psychology, XXXVII (October, 1940), 411-421.

Hertzman and Festinger studied shifts in level of aspiration when the aspirations and the performances of their own group were known by the subjects. The general trend was to change subsequent estimates of level of aspiration in the direction of the group's estimate. The majority of subjects changed their goals from their own previous aspirations to those of the group.[15]

Bruner and Rotter used the dart test in a sociological investigation of the level of aspiration. One hundred fifty-four Navaho Indians were given the dart tests with and without the results of the performance of others. It was found that the Navaho individual changed his own aspirations in the direction of the aspirations of the Navaho group once the group norms were made known to him.[16]

Influence of Other Groups on Level of Aspiration

Frank attempted to validate the measures of level of aspiration. He found that hearing the scores of another person tended to make the level of aspiration react more as a random guess. His analysis of data also revealed that the average level of aspiration deviated more from the median level of performance than did the average guess.[17]

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[15]M. Hertzman and L. Festinger, "Shifts in Explicit Goals in a Level of Aspiration Experiment," Journal of Experimental Psychology, XXVII (October, 1940), 439-452.

[16]Edward M. Bruner and Julian Rotter, "A Level of Aspiration Study Among the Ramah Navaho," Journal of Personality, XXI (March, 1953), 375-385.

[17]Jerome D. Frank, "A Comparison Between Certain Properties of the Level of Aspiration and Random Guessing," Journal of Psychology, III (January, 1937), 43-62.

Chapman and Volkman performed a study concerning the social determinants of the level of aspiration. They developed the idea of the importance of a frame of reference in arriving at one's level of aspiration. Knowledge of another group's performance was furnished to the subjects before they had formed an acquaintance with the task. Under these conditions, the aspiration level was significantly influenced. However, with the knowledge of prior performance, level of aspiration was not influenced by knowledge of another group's achievements.[18]

Gould and Lewis tested 180 college students to determine the influence of knowledge of another group's performance on an individual's level of aspiration. The findings revealed that a significant influence by the knowledge of another group's performance was exerted on an individual's level of aspiration.[19]

Kausler investigated the effect of a reference score upon level of aspiration. He tested three groups of subjects on an arithmetic test under the three following conditions: (1) without instructions to express a level of aspiration, (2) with instructions to express a level of aspiration, and (3) with instructions to express a level of aspiration, but with the availability of a group reference score.

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[18]Dwight W. Chapman and John Volkman, "A Social Determinant of the Level of Aspiration," Journal of Abnormal and Social Psychology, XXXIV (April, 1939), 225-238.

[19]Rosalind Gould and H. B. Lewis, "An Experimental Investigation of Changes in the Meaning of Level of Aspiration," Journal of Experimental Psychology, XXVII (October, 1940), 422-428.

Kausler found that the knowledge of reference scores increased the level of aspiration. He concluded that the frame of reference surrounding the indication of the level of aspiration was a significant influence on the degree and direction of aspiration.[20]

Zander, Medow and Efron performed an investigation where observer's expectations served as determinants of group aspiration. Subjects were informed of the score which those in another group expected the performing group to attain. Forty-eight groups of observers watched forty-eight teams perform ten trials of a task. An analysis of the data revealed that performers selected unattainable aspirations when observer's expectations were at a high level and attainable aspirations when observer's expectations were at a low level. However, performers selected aspirations they achieved or failed to achieve in about equal degree when no expectations were provided by the observers.[21]

Influence of Race on Level of Aspiration

MacIntosh examined the effects scores of Negroes had on different levels of aspirations of Caucasians and the effects scores of Caucasians had on different levels of aspiration of Negroes. The three levels of aspiration were: (1) Maximum Estimate - the best

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[20]D. H. Kausler, "Aspiration Level as a Determinant of Performance," Journal of Personality, XXVII (September, 1959), 346-351.

[21]A. Zander, Herman Medow, and Ronald Efron, "Observers Expectations as Determinants of Group Aspiration," Human Relations, XVIII (August, 1965), 273-287.

performance that the subject expected to do; (2) Actual Estimate - the performance that the subject actually expected to do; and (3) Least Estimate - the least level of performance the subject expected to do. It was revealed that whereas Negroes competing with Whites tended to lower their Least Level of aspiration and hold their Maximum and Actual Levels constant when informed that they were doing as well as Whites, Whites competing with Negroes tended to raise their Maximum and Actual Levels and hold their Least Level constant when they were informed they were doing as well as the Negroes. It was observed that Negroes who were competing with Whites tended to lower their Least Estimates more than the Negroes who were competing with Negroes.[22]

Antonovsky investigated the occupational aspirations of 378 middle and lower class Negro, White, and Puerto Rican students. Boys and girls in the tenth grade served as subjects. The findings revealed the following: (1) middle-class Whites clearly had a higher level of aspiration than the five other groups; (2) there was substantial similarity in patterns of response of the two Negro, the low-class Whites, and the middle-class Puerto Rican groups; and (3) the middle-class White boys consistently had higher aspiration than the middle-class boys of the other groups.[23] The findings of this study were in disagreement with an earlier study by Antonovsky and Lorwin,

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[22]Archibald MacIntosh, "Differential Effect of the Status of the Competing Group Upon the Levels of Aspiration," American Journal of Psychology, LV (October, 1942), 546-554.

[23]Aaron Antonovsky, "Aspirations, Class and Racial-Ethnic Membership," Journal of Negro Education, XXXVI (Fall, 1967), 385-393.

which found that Negroes exhibited a higher level of aspiration than Whites. In the earlier study, Negro and White males aged sixteen to twenty were used as subjects.[24]

Summary of Studies of Influences Affecting Level of Aspiration

Twelve studies related to influences affecting level of aspiration were reviewed.

Four studies were concerned with the influence of one's own group on level of aspiration. These studies were in agreement that individuals in a group set aspirations toward the mean performance level of their group.

Five studies concerned with the influence of other groups on level of aspiration were reviewed. Four studies found that other group scores influenced the direction and magnitude of the level of aspiration. One study found that hearing the scores of another person tended to make the level of aspiration react more as a random guess.

Three studies reviewed concerned race and level of aspiration. One study found that, whereas Negroes competing with Whites tended to lower their Least Level of Aspiration when informed that they were doing as well as Whites, Whites competing with Negroes tended to hold their least level constant when informed they were doing as well as the Negroes. One study found that Negroes had higher occupational

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[24] Ibid., citing A. Antonovsky and L. Lorwin, "Discrimination and Low Incomes," (New York: New York State Commission Against Discrimination, 1959), pp. 103-146.

aspirations than Whites. Another study contradicted this finding, claiming that Whites aspired higher occupationally.

LEVEL OF ASPIRATION IN PHYSICAL EDUCATION

There were nineteen studies reviewed concerning level of aspiration in physical education. The studies are reported under the following headings: (1) General Research in Physical Education Related to Level of Aspiration and (2) Level of Aspiration as a Motivational Factor in Physical Education.

General Research in Physical Education Related to Level of Aspiration

Smith reported the first study dealing with level of aspiration in physical education in 1949. The purpose of the investigation was to examine the effects of success and failure in athletics upon levels of aspiration. Smith questioned each of the fifty-eight players on the Southern California freshman football team several times a week concerning the number of minutes each thought he would play in the next week's game (immediate level of aspiration), and the total number of minutes aspired to for the season (ultimate level of aspiration). The players were approached individually and in private, and each successive estimate was made with the knowledge of how much he had previously played. The players were classified as successful or unsuccessful players on the basis of the number of minutes they played throughout the season. Among the more pertinent findings of Smith's study were the following: (1) successful individuals had a tendency

to raise their levels of aspiration while the unsuccessful individuals tended to lower their levels of aspiration; (2) individuals with extremely low levels of aspiration tended to escape a failure-producing situation by overt action; (3) high levels of aspiration were repeatedly maintained by some individuals following repeated experiences of failure; (4) individuals with the highest levels of aspiration continued to raise their levels after success and still met with success, even though this success had caused them to raise their aspiration level; (5) ultimate levels of aspiration did not correlate with ultimate accomplishments; and (6) the immediate level of aspiration correlated with the immediate accomplishments.[25]

Smith claimed these findings suggest that in real life athletic situations, a considerable number of players are forced to experience failure repeatedly and consistently. He felt that the implications to the physical educator are that more competitive team play should be used as a basis for grading.[26]

Hooley investigated the levels of aspiration of good and poor performing elementary and high school girls on tasks which stress the elements of power and control and the skills of jumping and throwing. The tasks involved were a jump reach for height, a jump reach for a controlled height, a standing broad jump for distance, a standing broad jump for floor targets, an overhand basketball throw to a wall

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[25]Carnie H. Smith, "Influence of Athletic Success and Failure on the Level of Aspiration," Research Quarterly, XX (May, 1949), 196-208.

[26]Ibid., p. 208.

target, and a two-handed basketball underhanded throw for distance. Subjects were selected from the results of a pre-test of a larger group of girls on the above tasks. Good performers were selected as those scoring more than one standard deviation above the group mean and poor performers as those scoring more than one standard deviation below the group mean scores on each task. Hooley found that good performing high school girls and poor performing elementary school girls in the above tasks set similar positive levels of aspiration regardless of failure. A similarity was found between the poor performing high school girls and the good performing elementary school girls in that they set negative levels of aspiration following success. Hooley concluded that there was no stability in the setting or reaching of levels of aspiration.[27]

Price investigated the relationship between the level of aspiration and performance in selected motor tasks utilizing twenty-six college women. The motor tasks selected were basketball throw, wall pass, softball throw, vertical pull, jump reach, and penny cup. Level of aspiration was scored as the average difference between aspiration and performance on each of the four trials. A significant relationship was found between that which a college woman attempts to achieve on a motor task and that which she actually achieves. Further, when a

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[27]Agnes Marie Hooley, "Level of Aspiration of Good and Poor Performing Elementary and High School Girls in Selected Physical Education Activities" (microcarded Doctoral dissertation, University of Wisconsin, Madison, 1954), pp. 1-219.

subject performed alone without group comparisons, the tendency was to be more realistic in setting goals.[28]

Stratton tested 110 nine-year-old boys to determine methods of effectively grouping them according to level of aspiration which was based on a maximum grip strength test. If the aspiration score was greater than the performance score, the derived score was assigned a positive sign, and if it was smaller, a negative sign was assigned. It was found that: (1) the second discrepancy score was the most meaningful score in terms of high correlations with other derived scores; (2) subjects with large second aspiration discrepancies either highly positive or highly negative, generally had higher grip strength than subjects with small second aspiration discrepancies; and (3) subjects whose predictions of their second and third grip strength trials were generally low or negative in comparison with their first performance trial, were higher in grip strength than those subjects who made high positive predictions. It was concluded that the second aspiration discrepancy score best differentiated the nine-year-old subjects into the following basic aspiration groups: High-positive, Low-positive to Low-negative, and High-negative.[29]

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[28]Nannette Price, "The Relationship Between the Level of Aspiration and Performance in Selected Motor Tasks" (microcarded Master's thesis, University of North Carolina Women's College, Greensboro, 1960), pp. 1-57.

[29]Stephen Stratton, "Methods of Grouping Boys Nine Years of Age According to their Level of Aspiration Based on Grip Strength Efforts" (microcarded Master's thesis, University of Oregon, Eugene, 1960), pp. 1-83.

Clarke and Clarke investigated the relationship between levels of aspiration and selected physical factors of ninety-eight nine-year-old boys utilizing a level of aspiration test based on grip strength. The subjects were divided into high, low and zero aspiration discrepancy groups on the basis of their first and second discrepancy scores. When the first three groups were compared in regard to the measures of physical factors, the means of the high group were significantly higher than the means of the zero group in height, weight, McCloy's Classification Index, and Roger's Physical Fitness Index. Further, the high group was significantly superior to the low group in Roger's Physical Fitness Index. No significant relationships were found between the second group of aspiration discrepancy scores and measures of selected physical factors. Clarke and Clarke concluded that nine-year-old boys who expressed higher levels of aspiration were physically superior in size and strength to those who expressed neither an increase nor a decrease in their assessments. The researchers felt that the boys who were not physically superior in size and strength to others their age were not willing to risk the chance of failure, and chose the aspiration level that seemed to insure at least some degree of success. Further, the subject's selection of level of aspiration appeared to reflect the previous success or failure which he associated with the task.[30]

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[30]H. Harrison Clarke and David H. Clarke, "Relationship Between Level of Aspiration and Selected Physical Factors of Boys Aged Nine Years," Research Quarterly, LXI (March, 1961), 12-19.

Greene correlated measures of personal-social status and selected physical factors, using seventy-eight ten-year-old boys as subjects. The second aspiration discrepancy score, the difference between the second performance and the second aspiration, was used with the sign disregarded. Personal-social status was measured by teacher ratings, acceptance by peers, level of aspiration, and questionnaire. Skeletal maturity, anthropometric tests of body structure, muscular strength, explosive power, speed, and agility were the selected physical measures. No significant correlations were found between level of aspiration and measures of personal-social status, although magnitude of the aspiration discrepancy score was positively related to body weight and gross strength.[31]

Clarke and Stratton conducted a study designed primarily to investigate methods of grouping nine-year-old boys into defined categories according to their level of aspiration as interpreted from maximum grip strength efforts. One hundred ten Caucasian boys were given three level of aspiration tests based on a maximum grip strength effort of the subject's right hand. Each subject was tested alone. Three performance scores and three aspiration scores were obtained from each subject, the first score being a performance score and the last an aspiration score. Thus, there were three aspiration discrepancy scores for each subject. If the aspiration score was larger than the

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[31]Walter H. Greene, "Interrelationships Between Measures of Personal Social Status and the Relationship of These Measures to Selected Physical Factors of Ten-Year Old Boys" (microcarded Master's thesis, University of Oregon, Eugene, 1961), pp. 1-119.

performance score, the aspiration discrepancy score was assigned a positive sign. If the performance score was larger than the aspiration score, the aspiration discrepancy score was given a negative sign. It was found that the second aspiration discrepancy score was the most meaningful of the discrepancy scores. It correlated well relatively, with performance discrepancy, aspiration discrepancy, and grip strength performance scores. Further, the second aspiration discrepancy score differentiated best between the three basic groups: High-positive, low-positive to low-negative, and high-negative.[32]

Greene used four level of aspiration measures to investigate peer status and level of aspiration of 209 elementary boys as related to their maturity, physique, structure, strength, and motor ability characteristics. Level of aspiration was based upon Stratton's grip strength test procedures. A slight relationship was found to exist between level of aspiration measures and sociometric measures. Generally low and insignificant correlations were found between level of aspiration measures and physical factors. Green reinforced Stratton's conclusion that the second aspiration discrepancy was the most meaningful score in terms of relatively high correlations with other level of aspiration scores.[33]

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[32] H. Harrison Clarke and Stephen T. Stratton, "A Level of Aspiration Test Based on the Grip Strength Efforts of Nine-Year-Old Boys," Child Development, XXXIII (December, 1962), 898-899.

[33] Walter H. Greene, "Peer Status and Level of Aspiration of Boys as Related to Their Maturity, Physique, Structure, Strength, and Motor Ability Characteristics" (microcarded Doctoral dissertation, University of Oregon, Eugene, 1964), pp. 1-259.

Stratton tested 186 nine and eleven-year-old boys to determine the reliability of level of aspiration scores and their relationship to growth and development. Measures of growth and development were maturity, body structure, strength, motor ability, reaction time, interests, peer status, scholastic achievement and athletic ability. It was concluded that level of aspiration had no marked relationship to growth and development factors. Further, he substantiated his previous finding that the most meaningful, reliable, and significant measure of level of aspiration was the second aspiration discrepancy score.[34]

Schiltz and Levitt studied the level of aspiration of high-skilled and low-skilled fifth and sixth grade boys. Subjects were selected on the basis of scores earned performing a modified version of the Iowa Brace Test. The twenty-three subjects were placed into two skill groups and given a motor test which consisted of moving blocks from one board to another board. After a performance level was established, an element of failure was induced by stopping the subject before the expressed level of aspiration was reached. It was found that the level of aspiration of high and low-skilled groups differed significantly only on the third trial. Further findings revealed that failure had a significant effect on both groups. Findings from several earlier studies were substantiated as the high-skilled group expressed higher levels of aspiration than the low-skilled subjects. However,

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[34]Stephen Stratton, "The Reliability of Level of Aspiration Scores and Their Relationship to Measures of the Growth and Development of Eleven Year Old Boys" (microcarded Doctoral dissertation, University of Oregon, Eugene, 1964), pp. 1-121.

the level of aspiration of the high-skilled group and the low-skilled group over three trials did not differ in responses.[35]

Chaloupka investigated the generality or specificity of levels of aspiration in selected psychomotor and cognitive tasks. Ninety eighth grade male students were tested for levels of aspiration on two gross psychomotor tasks, two fine psychomotor tasks, and a cognitive task. Upon completing each of three performance tests, subjects privately indicated on their score cards their level of aspiration for the next attempt at the task. Aspiration discrepancy was scored as the difference between the level of aspiration score and the previous performance score. An aspiration discrepancy score was positive when the aspiration score was greater than the preceding performance score, and negative if the preceding performance score was greater. It was found that when total aspiration discrepancy scores for the two gross and two fine psychomotor tasks and one cognitive task were intercorrelated, significant but low correlations were found to exist among all tasks except for the Standing Triple Broad Jump. Further, nonsignificant correlations were found between aspiration and performance for two gross and two fine psychomotor tasks and a cognitive task. Chaloupka concluded: (1) there is some evidence of generality of levels of aspiration in psychomotor and cognitive tasks; (2) there is specificity of levels of aspiration for psychomotor and cognitive tasks as related to motor ability or academic ability; and (3) no relationship exists

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[35]Jack H. Schiltz and Stuart Lewitt, "Levels of Aspiration for High and Low-Skilled Boys," Research Quarterly, XXXIX (October, 1968), 696-703.

between level of aspiration and performance on psychomotor and cognitive tasks.[36]

Dugas investigated whether any differences in level of aspiration existed between high and low performance groups when based upon individual scores of four motor fitness items and total Motor Fitness Scores. One hundred college male students were tested on the twenty-yard sprint, the standing broad jump, the bar hang, and the bench press. Each subject was requested to predict his performance three times, then followed each prediction with a performance of that task. The second aspiration discrepancy score, the difference between the second performance and the predicted score for the third performance was utilized by the researcher. The findings showed that significant differences in levels of aspiration were found in the standing broad jump and bar hang when using the individual motor performance scores. When the performance groups were based on the total Motor Fitness Scores, the only significant difference was found in the bar hang.[37]

Stafford conducted a study investigating the effects of age and sex on the level of aspiration in six selected motor tasks. These tasks were: a grip strength task, a chalk jump task, a hopscotch task, an

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[36]Larry J. Chaloupka, "Analysis of Generality or Specificity of Level of Aspiration in Selected Psychomotor and Cognitive Tasks" (unpublished Doctoral dissertation, Louisiana State University, Baton Rouge, 1969), pp. 1-117.

[37]Edmond A. Dugas, "A Comparison of Aspiration Levels of High and Low Performing College Men in Selected Motor Fitness Items" (unpublished Doctoral thesis, Louisiana State University, Baton Rouge, 1969), pp. 1-67.

object replacement task, and Part I of Cassell Group Level of Aspiration Test. Two hundred forty white boys and girls representing grades three, six, nine, and twelve, served as subjects. Three performance and two aspiration scores were obtained from each subject on each of the motor tasks. The aspiration discrepancy score was obtained by dividing the second performance score into the second aspiration score. The quotient was multiplied by 100 and the score recorded as a percentage. It was found that no differences existed between the sexes in their levels of aspiration for each task. Differences were found among the age groups in their aspiration discrepancy scores in four of the six selected motor tasks.[38]

Level of Aspiration as a Motivational Factor in Physical Education

Hesse conducted a study concerning the effects of self-competition and team competition upon the performance of sixth, eighth, and ninth grade girls. The two motor performance items used were the thirty-yard dash and the standing broad jump. The conditions under which the subjects performed were a normal testing situation, a situation of self competition and conditions of team competition. Hesse found no significant differences in mean scores under the three testing conditions, although the greatest number of high scores occurred in the competitive situations. Self competition was found to act as a greater

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[38]Beverly Louise Stafford, "The Effect of Age and Sex on the Level of Aspiration in Selected Motor Tasks" (unpublished Doctoral dissertation, Louisiana State University, Baton Rouge, 1969), pp. 1-83.

incentive for achievement than team competition.[39]

Ellis studied the effects of knowledge of results and stated expressions of level of aspiration upon measures of strength and motor performance of seventh and ninth grade girls. Within each grade level, twenty-four subjects were assigned to one of three groups. One group performed without knowledge of results, the second with knowledge of results, and the third with knowledge of results supplemented with verbal expression of level of aspiration. Ellis found that grip strength and standing broad jump scores of seventh and ninth grade girls who were tested under conditions of knowledge of results and level of aspiration respectively were not significantly different from each other or from the scores of similar groups tested under conditions of no knowledge of results.

The importance of success or failure in influencing the direction of subsequent aspirations was demonstrated in the sense that performers tended to raise their levels of aspiration after experiencing success in attaining or surpassing stated levels of aspiration.[40]

Strong conducted an extensive study with 434 sixth grade

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[39]Barbara P. Hesse, "A Study of the Effects of Self-Competition and Team Competition Upon the Performance of Sixth, Eighth, and Ninth Grade Girls" (microcarded Master's thesis, University of Wisconsin, Madison, 1955), pp. 1-72.

[40]Peggy D. Ellis, "The Effect of Knowledge of Results and Level of Aspiration on Measures of Strength and Motor Performance of Junior High School Girls" (microcarded Master's thesis, University of Wisconsin, Madison, 1962), pp. 1-66.

children to determine the effect of six motivating conditions on their performance on seven physical fitness items. The physical fitness test items were fifty-yard dash, shuttle run, sit-ups, 600-yard run-walk, bent-arm bar hang, softball throw for distance and standing broad jump. The six motivating conditions were competition against self, team competition, level of aspiration, competition to establish class records, competition against someone of markedly different ability, and competition against someone of nearly equal ability. Strong pointed out that the level of aspiration motivating condition may be basic to all forms of motivation. He concluded that motivation by level of aspiration and team competition was more effective than competition against self, competition to establish class records, competition against someone of nearly equal ability, and competition against someone of markedly different ability. The validity of the measures of physical fitness test is dependent upon the motivating conditions under which the tests are administered.[41]

The effects of three types of motivation upon the ability of boys of four different age levels to perform muscular work to exhaustion were studied by Wilkinson. Verbal encouragement, verbal disparagement, and level of aspiration were the three motivational techniques used on the eighty subjects drawn from each of the following four age levels: seven and eight-year-olds, ten and eleven-year-olds,

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[41]Clinton H. Strong, "Motivation Related to Performance of Physical Fitness Tests," Research Quarterly, XXXIV (December, 1963), 497-507.

thirteen and fourteen-year-olds, and sixteen and seventeen-year-olds. Forearm flexion was performed to exhaustion on the Kelso-Hellobrandt ergograph. It was found that all three forms of motivation were effective in producing significant improvement in performance, especially for the seven-eight and ten-eleven-year-olds. Verbal disparagement and level of aspiration were more effective motivators of the sixteen-seventeen-year-old subjects.[42]

Dudley used 227 junior high girls in comparing two methods of motivating the learning of motor skills by junior high school girls. Level of aspiration and achievement goal prescribed by the teacher were the two motivating methods. The subject's present status in general motor ability was measured by the Scott Motor Ability Test Battery. The subjects then participated in a basic skills unit and were re-administered the motor ability test. It was found that significant gains in motor ability were produced by both methods of motivation. However, the method in which the teacher set the level of aspiration caused significantly higher gains than that in which the subjects expressed their own aspiration levels.[43]

Waterman studied the effects of individual setting motivation and group setting motivation as measured by the performance of 102 elementary school children on the Washington State Physical Fitness

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[42]Robert E. Wilkinson, "Effect of Motivational Condition Upon the Performance of Boys of Different Age Levels" (microcarded Doctoral dissertation, Springfield College, Massachusetts, 1965), pp. 1-164.

[43]Hazel Dudley, "A Comparison of Two Methods of Motivation on the Learning of Motor Skills" (unpublished Master's thesis, University of Iowa, Iowa City, 1966), pp. 1-63.

Test. A group section and an individual section were formulated based on the pretest results. During a twelve week period, each section was tested three times. Before each test was administered, the subject expressed his aspiration level of the test. Individual setting results were reported on an individual basis, whereas group setting results were given in gross totals. A post-test was given at the end of the twelve-week training period. Waterman found that when level of aspiration was used as a motivational technique, a group setting was superior to an individual setting. Both sections increased significantly in performance.[44]

Summary of Studies of Level of Aspiration in Physical Education

Nineteen studies related to level of aspiration in physical education were reviewed. Four studies found the second aspiration discrepancy score the most meaningful level of aspiration score. Three studies concluded level of aspiration was nonsignificantly related to personal-social status, sociometric measures, and growth and development factors. Strength and level of aspiration were found significantly related in two studies. Level of aspiration was reported to be an unstable trait in two studies. One study found evidence of generality of level of aspiration in psychomotor and cognitive tasks. This same study found no significant relationship between level of aspiration

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[44]D. Waterman and others, "Motivation and Achievement in the Elementary School," Elementary School Journal, LXVII (April, 1967), 375-380.

and performance. Another study contradicted the finding and claimed level of aspiration and performance were significantly related. One study found differences in levels of aspiration between high and low performance groups on some motor fitness items and no differences on others. In one study, high-skilled groups expressed higher levels of aspiration than low-skilled groups. Another study reported no differences existed between the sexes in their levels of aspiration. In the same study, it was found that age affected levels of aspiration in four of the six motor tasks.

Six studies expressed varied opinions as to the value of level of aspiration as a motivational technique in physical education. Four studies reported level of aspiration motivation produced significant gains in performance. Two studies found level of aspiration motivation produced significantly higher results than various other methods of motivation; however, two studies contradicted these findings.

CHAPTER III

DESCRIPTION OF PROCEDURE

OVERVIEW

The purpose of the study was to investigate the influence of observers of the same race and a racially mixed audience on level of aspiration and gross motor performance of college males. The study was conducted at the University of Southwestern Louisiana, Lafayette, Louisiana, during the spring semester, 1970. Fifty-seven Caucasian and fifty-seven Negro undergraduate male students were used as subjects. The subjects participated in the study on a voluntary basis.

A measure of striking power and the bar hang were the two motor tasks used in the study. Each subject was assigned to a segregated group or a mixed group. There were thirty-eight subjects in the Caucasian Group, thirty-eight subjects in the Negro Group, and thirty-eight subjects in the Mixed Group. The Mixed Group was comprised of nineteen Caucasian and nineteen Negro subjects. Subjects had three performance scores and two aspiration scores for each task. Aspiration discrepancy scores, computed for each subject on each task, and performance scores were used to determine the influence of observers of the same race and a racially mixed audience.

SELECTION OF SUBJECTS

Posters were placed throughout the campus of the University of Southwestern Louisiana containing an announcement that the Men's

Physical Education Department of the University was in need of volunteers to be tested for the establishment of norms for a measure of striking power and the bar hang. Volunteer forms were left at the location of each poster, with instructions to return the form to any member of the Physical Education Department. Included on the form was a section in which the student circled the hours that he could be tested. There were 415 Caucasian and 77 Negro volunteers. Since there were two testers used in the study, schedules for testing were established with consideration given to this factor. Although more Caucasian subjects could have been tested, only sixty were randomly selected for the study. Only sixty Negro subjects could fit into the testing schedule established by the researcher. Several subjects failed to complete both testing periods, therefore the study was completed with thirty-eight subjects in the Caucasian Group, thirty-eight in the Negro Group, and thirty-eight in the Mixed Group. The Mixed Group was comprised of nineteen Caucasian and nineteen Negro subjects.

SELECTION AND DESCRIPTION OF MOTOR TASKS

Criteria Employed in Selection of Motor Tasks

Rotter and Price indicated that several criteria should be established when developing tasks for the measurement of level of

aspiration.[1,2] Hilgard felt that the task should be novel and that the task should contain an appropriate level of difficulty so that the learners remain ego-involved.[3]

Himmelweit presented the following criteria as a guide in task selection for studies concerning level of aspiration.

1. The method of scoring should be unidimensional to enable the subject to appreciate readily any improvement or deterioration in his performance.

2. The tasks should not be associated with a specific occupational proficiency and thus introduce a bias for some subjects.

3. The task must be within a given range of difficulty. No ego-involvement occurs when tasks are either too easy or too difficult.

4. The test should allow for improvement on successive trials.

5. Successive scores should show moderately high intercorrelations to make approximate anticipation of future scores possible.

6. The test should possess a certain interest value.[4]

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[1]Julian Rotter, "Level of Aspiration as a Method of Studying Personality, II. Development and Evaluation of a Controlled Method," Journal of Experimental Psychology, XXXI (July, 1942), 410-422.

[2]Nannette Price, "The Relationship Between the Level of Aspiration and Performance in Selected Motor Tasks" (microcarded Master's thesis, University of North Carolina Women's College, Greensboro, 1960), pp. 1-57.

[3]Ernest R. Hilgard, Theories of Learning (New York: Appleton Century-Crofts, Inc., 1956), p. 277.

[4]H. J. Himmelweit, "The Level of Aspiration of Normal and of Neurotic Persons," British Journal of Psychology, XXXVII (January, 1947), 45.

Motor Tasks

The two motor tasks used in the study possessed elements which appeared to fulfill the criteria guide for level of aspiration tasks by Himmelweit. These elements were as follows: (1) the subject was told his performance score immediately after performing each task; (2) scores were in units in which the subject quickly recognized improvement or deterioration of performance; (3) subjects had not had previous experiences in the selected motor tasks; (4) all subjects were able to perform each task and thus remain ego involved; (5) many subjects did improve performance scores on successive trials; (6) successive performance scores on each item showed high correlations; and (7) both items appeared to interest the subjects.

Striking Power. The striking power apparatus shown in Figure 1, was devised by the researcher solely for the purpose of measuring striking power in the study. The wooden base of the striking power apparatus was two feet by four and one-half feet in size and two inches in thickness. A first class lever was located near the center of the platform. The lever arm, which was three feet in length, was composed of channel iron with an oak wood fill. At the striking end of the lever arm was a steel disc nine inches in diameter. A hard rubber mat, one-half inch thick covered the steel disc to decrease or eliminate the shock when the mallet contacted the disc. The disc was connected to the lever arm by pieces of angle iron two inches in length. The pieces of angle iron were arranged from the disc to the lever arm in a cone-shaped manner so that no matter where the mallet struck the

disc, the force would be absorbed at approximately the same distance from the fulcrum. As the disc end of the lever arm was moved downward by the force of the mallet, the other end was moved upward causing the slide to rise between two vertical oak posts. The posts were two inches by two inches in size and were four inches apart. On the outside of each vertical post, one-quarter inch holes were located every one-half inch. A one-quarter inch sheet metal guide was located on each side of the line of holes. Located on the outside part of the slide were two metal rods that were two inches long and tapered to a point. A rubber band stabilized with contact cement kept the rods pointed down against the vertical posts from their attachments. As the slide moved upward, the points of the rods, which were held against the posts and over the line of holes by the rubber bands, slid freely. When the slide reached the highest point and started down, the point of each rod immediately entered the first hole in the downward path, stopping the slide. Thus, the distance the slide was propelled upward was measured to the nearest one-half inch. Four guide wires containing turnbuckles were attached to the base and the top of the vertical posts to keep them as level as possible.

The disc on the lever arm was struck with a wooden mallet. The mallet head was five inches in diameter and eight inches in length and made of green hickory. Both ends of the mallet head were beveled. The handle was made of dry hickory, was thirty inches in length and one and one-half inches in diameter.

The task reliability of striking power, as measured by the

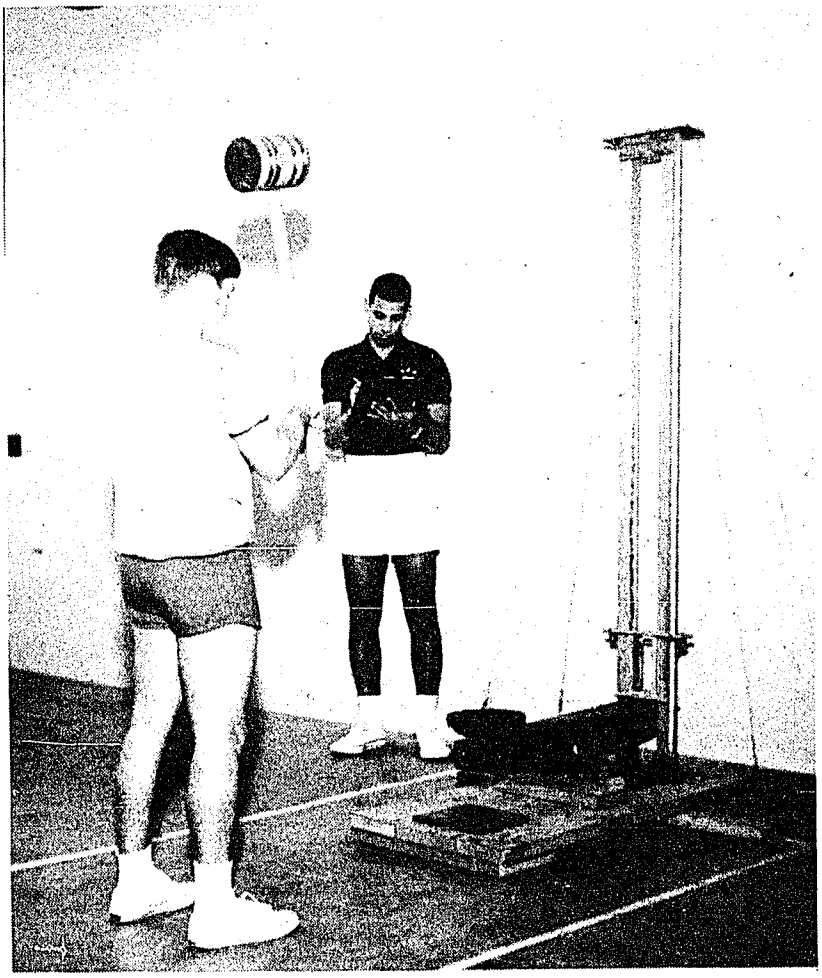

FIGURE 1

AN ILLUSTRATION OF THE STRIKING POWER APPARATUS

apparatus for the study, was computed using the Pearson Product-Moment Method of correlation. The second and third performance scores for striking power were used to determine this relationship. The coefficient of reliability was found to be .85.

In performing the task the subject was instructed to grip the mallet handle with both hands, one on each side of a quarter-inch piece of tape placed six inches from the end of the handle. The subject assumed an even stance in front of the striking power apparatus. He leaned the trunk forward and placed the mallet above the disc by extending the arms, so that the head of the mallet was just over the edge of the disc nearest the subject. This readily assured the subject that with proper concentration and effort, he could strike the center area of the disc. With the body erect, the mallet handle was brought to a vertical position approximately one foot in front of the subject. At this time the subject's forearms were in a horizontal position. The subject held this position for a brief period. After receiving a nod from the tester the subject moved the mallet up, back, forward and down striking the disc with the mallet as hard as possible.

Bar Hang. A horizontal bar, one and one-half inches in diameter and four feet long, was held eight feet above the floor by two vertical steel uprights. A steel base three feet by four feet in size and one-quarter inch thick supported the vertical steel uprights. A small ladder, two feet in height was placed underneath the horizontal bar. While standing on the small ladder, the subject grasped the bar with both hands utilizing a pronated grip. The subject positioned his body

so that the front of his chin was contacting the bar (in the same horizontal plane as the bar). The instant the subject assumed the proper position for the execution of the test the investigator gave the command, "Go", and started the watch. The ladder was removed at that time by the next subject to be tested. The subject hung from the bar in this position until contact between the chin and bar was broken. The subject could not move his head from the bar or turn it to either side. The researcher, who was standing under and to the side of the bar, stopped the watch the instant a separation occurred between the bar and the subject's chin. Figure 2 depicts the correct bar hang position. Each performance was measured by a Minerva Stop Watch and was recorded to the nearest one-tenth of a second. The task reliability of the bar hang was computed using the Pearson Product-Moment method of correlation. The second and third performance scores of the bar hang were correlated producing a reliability coefficient of .94.

ADMINISTRATION OF TASKS

Preliminary Procedures

After the necessary number of students volunteered to participate in the study, each subject was assigned to a racially segregated or racially mixed group. Caucasian subjects were randomly assigned to one of the four groups consisting of the all-Caucasian subjects or to one of the four Mixed Groups. Negro subjects were randomly assigned to one of the four all-Negro groups or to one of the four Mixed Groups. Ten

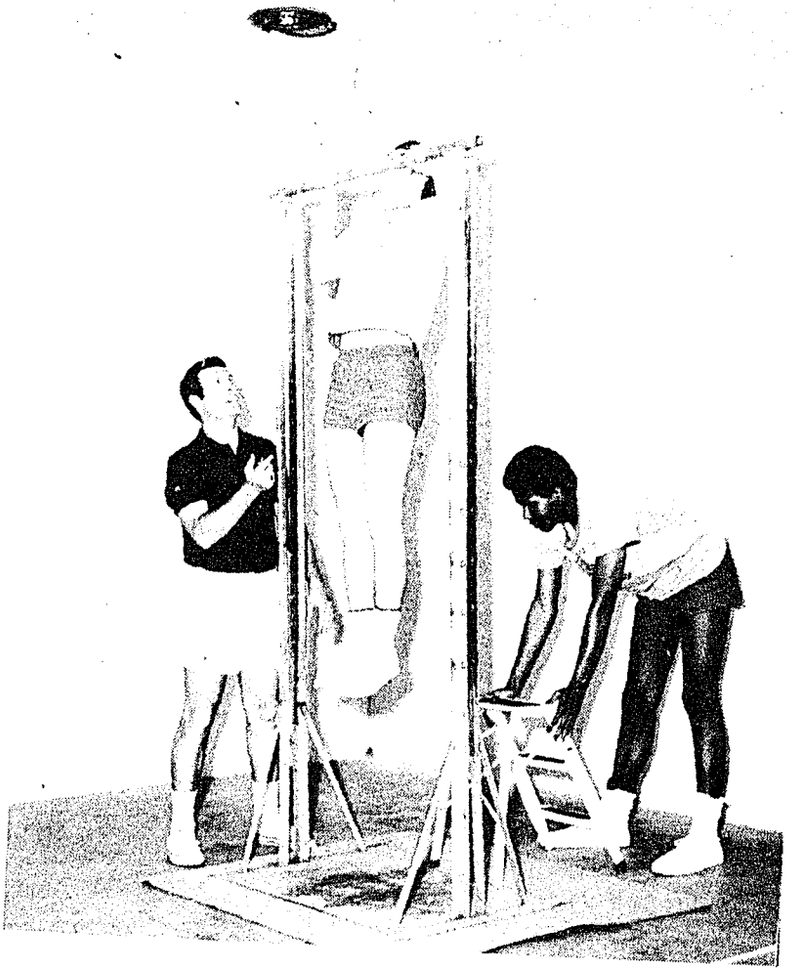

FIGURE 2

AN ILLUSTRATION OF A SUBJECT PERFORMING THE BAR HANG

subjects comprised each of the racially segregated groups. Each racially mixed group had twelve to fourteen subjects; however, only five Caucasian and five Negro subjects were tested in each group.

A schedule for administration of the motor tasks was arranged and each participant was asked to report to the handball room of the Earl K. Long Gymnasium at the University of Southwestern Louisiana at the time his group was to be tested.

Testing Assistant

The nature of the study required the use of a Negro testing assistant. A Negro faculty member in the Physical Education Department of the University of Southwestern Louisiana served in this capacity. The author tested the Caucasian subjects, and the testing assistant tested the Negro subjects. The author and testing assistant alternated directing the testing of the Mixed Groups, while the other served as an assistant. The testing assistant was informed by the author of the true purpose of the study as well as the false purpose. He was completely oriented concerning the testing techniques, schedules, and procedures used in conducting the study.

Testing Procedures

As subjects entered the testing room they were given a brief orientation concerning the following items: (1) The purpose of the study was stated in such a manner as to indicate that norms were being established for striking power and the bar hang. The true purpose of the study was withheld in order that the aspiration discrepancy scores

would remain realistic. (2) Instructions for each test item were given, including demonstrations of how each test item should be performed. (3) Instructions for the testing procedures and testing schedule were presented. The subjects were told that two separate testing periods were required to obtain the three performance and two aspiration scores for the two motor tasks. The following sequence of scores was derived for each subject during the first testing period:

1. First striking power performance score (P_1).
2. First striking power aspiration score (A_1).
3. Second striking power performance score (P_2).
4. Second striking power aspiration score (A_2).
5. Third striking power performance score (P_3).
6. First bar hang performance score (P_1).
7. First bar hang aspiration score (A_1).

The following sequence of scores was obtained during the second testing period:

1. Second bar hang performance score (P_2).
2. Second bar hang aspiration score (A_2).
3. Third bar hang performance score (P_3).

The subject was asked to perform to the best of his ability. Following each performance, the subject and his group were informed of the performance score. After each member of the group obtained his first performance score, he was asked individually, in the presence of his group, to state his first aspiration score in numerical deviation from the previous performance score. For example, if the first

performance score for striking power was 24.0 inches and the subject felt he could raise his score 3.0 inches, he verbally indicated, "plus 3.0 inches".

The testing procedures were repeated until each subject had three performance and two aspiration scores for both items. The striking power scores were obtained in one testing period. The bar hang scores were obtained in two testing periods to allow ample time for recuperation from possible fatigue.

STATISTICAL DESIGN

Aspiration Discrepancy Score

An aspiration discrepancy score was determined for each subject on each task. The second performance score and the second aspiration score were used to compute the subject's aspiration discrepancy score. Stratton found that the second aspiration discrepancy score, that is the difference between the subject's second trial and his prediction for the third trial, was the most meaningful score in terms of his correlations with other scores derived from a similar test.[5] Greene further substantiated Stratton's conclusion that the second aspiration discrepancy score was the most meaningful score in terms of relatively

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[5]Stephen Stratton, "Methods of Grouping Boys Nine Years of Age According to Their Level of Aspiration Based on Grip Strength Efforts" (unpublished Master's thesis, University of Oregon, Eugene, 1960), p. 79.

high correlations with other level of aspiration scores.[6]

Another study by Stratton supported his earlier findings that the second aspiration discrepancy score was the most significant, reliable, and meaningful of the level of aspiration measures.[7]

The aspiration discrepancy score for this study was derived by the quotient method. Stafford explained that this score was computed by dividing the performance score into the aspiration score. The quotient was multiplied by 100 in order that the score be recorded as a percentage.[8]

$$\frac{\text{Second aspiration score}}{\text{Second performance score}} \times 100 = \text{Aspiration Discrepancy Score}$$

When a subject's aspiration was identical to his performance, an aspiration discrepancy score of 100 percent was indicated. If the aspiration discrepancy score was more than 100 percent the indication was that the subject's level of aspiration score was greater than his performance score. An aspiration discrepancy score of less than 100 percent indicated that the subject's performance score was greater than his level of aspiration score.

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[6]Walter H. Greene, "Peer Status and Level of Aspiration of Boys as Related to Their Maturity, Physique, Structural Strength, and Motor Ability Characteristics" (unpublished Doctoral dissertation, University of Oregon, Eugene, 1964), p. 221.

[7]Stephen Stratton, "The Reliability of Level of Aspiration Scores and Their Relationship to Measures of the Growth and Development of Eleven Year Old Boys" (unpublished Doctoral dissertation, University of Oregon, Eugene, 1964), p. 101.

[8]Beverly Louise Stafford, "The Effects of Age and Sex on the Level of Aspiration in Selected Motor Tasks" (unpublished Doctoral dissertation, Louisiana State University, Baton Rouge, 1969), p. 8.

Performance Score

The second performance score was used to determine whether any differences existed between the groups when performing a measure of striking power and the bar hang.

Analysis of Data

The data were processed at the Computer Research Center, Louisiana State University, Baton Rouge, Louisiana. Analysis of variance was used to determine whether differences in aspiration discrepancy scores and performance scores existed among the three groups for each motor task. The Pearson Product-Moment method of correlation was used to determine the relationship between the second and third performance scores and between the second performance scores and second aspiration scores for each motor task.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The data were analyzed to determine whether there were significant differences in the aspiration discrepancy scores and performance scores of the groups performing two gross motor tasks under the influence of observers of the same race and a racially mixed audience. Analysis of variance was used to make these comparisons. The Pearson Product-Moment method of correlation was used to determine the relationship between the second performance scores and the second aspiration scores for each task.

ANALYSIS OF VARIANCE FOR ASPIRATION DISCREPANCY SCORES

Striking Power

There were thirty-eight subjects in the Caucasian Group, with aspiration discrepancy scores for striking power ranging from 100 to 127; thirty-eight subjects in the Negro Group, with aspiration discrepancy scores for striking power ranging from 85 to 132; and thirty-eight subjects in the Mixed Group, with aspiration discrepancy scores for striking power ranging from 100 to 133.

The mean aspiration discrepancy score in striking power for the Caucasian Group was 106.55, for the Negro Group was 105.26 and for the Mixed Group was 106.18.

It is shown in Table I that the groups, performing under racially segregated and racially mixed conditions did not differ significantly in mean aspiration discrepancy scores using striking power as the motor task.

TABLE I

ANALYSIS OF VARIANCE FOR ASPIRATION DISCREPANCY SCORES OF CAUCASIAN, NEGRO AND MIXED GROUPS PERFORMING A MEASURE OF STRIKING POWER

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F	P
Among	2	33.53	16.77	.31	N.S.
Within	111	5916.47	53.30		
Total	113	5950.00			

F needed at .05 level, 3.08; at .01 level, 4.80.
Mean Aspiration Discrepancy Score of the Caucasian Group, 106.55; Negro Group, 105.26; Mixed Group, 106.18.

Bar Hang

There were thirty-eight subjects in the Caucasian Group, with aspiration discrepancy scores in the bar hang ranging from 81 to 123; thirty-eight subjects in the Negro Group, with aspiration discrepancy scores in the bar hang ranging from 61 to 132; and thirty-eight subjects in the Mixed Group, with aspiration discrepancy scores in the bar hang ranging from 75 to 200.

The mean aspiration discrepancy score in the bar hang for the

Caucasian Group was 100.58, for the Negro Group was 104.26 and for the Mixed Group was 105.95.

The resulting F of 1.36 shown in Table II failed to meet the 3.08 needed to be significant at the .05 level of confidence. It was evident that the groups, performing under racially segregated and racially mixed conditions did not differ significantly in mean aspiration discrepancy scores when performing the bar hang.

TABLE II

ANALYSIS OF VARIANCE FOR ASPIRATION DISCREPANCY SCORES OF CAUCASIAN, NEGRO AND MIXED GROUPS PERFORMING THE BAR HANG

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F	P
Among	2	572.91	286.46	1.36	N.S.
Within	111	23,434.52	211.12		
Total	113	24,007.43			

F needed at .05 level, 3.08; at .01 level, 4.80.
Mean Aspiration Discrepancy Score of the Caucasian Group, 100.58; Negro Group, 104.26; Mixed Group 105.95.

ANALYSIS OF VARIANCE FOR PERFORMANCE SCORES

Striking Power

Subjects in the Caucasian Group had scores for striking power ranging from 11.0 inches to 33.0 inches. Performance scores for

subjects in the Negro Group ranged from 13.0 inches to 35.0 inches. Scores in the Mixed Group ranged from 13.5 inches to 32.5 inches.

The mean performance score in striking power for the Caucasian Group was 24.51 inches, for the Negro Group was 23.50 inches and for the Mixed Group was 21.29 inches.

Table III indicates that the F of 1.20 failed to meet the F of 3.08 needed to reach the .05 level of confidence. As evidenced by this, the groups performing under racially segregated and racially mixed conditions did not differ significantly in performance scores when striking power was the motor task.

TABLE III

ANALYSIS OF VARIANCE FOR PERFORMANCE SCORES OF CAUCASIAN, NEGRO AND MIXED GROUPS PERFORMING A MEASURE OF STRIKING POWER

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F	P
Among	2	72.50	36.25	1.20	N.S.
Within	111	3349.46	30.17		
Total	113	3421.96			

F needed at .05 level, 3.08; at .01 level, 4.80.
Mean Performance Score of the Caucasian Group, 24.51 inches; Negro Group, 23.50 inches; and Mixed Group, 21.29 inches.

Bar Hang

In the Caucasian Group scores for the bar hang ranged from 8.8 seconds to 56.7 seconds. Subjects in the Negro Group had performance scores ranging from 6.3 seconds to 75.0 seconds. The Mixed Group produced scores for the bar hang ranging from 0.8 seconds to 59.0 seconds.

The mean performance score of the Caucasian Group was 34.69 seconds, for the Negro Group was 33.39 seconds and for the Mixed Group was 32.16 seconds.

As depicted in Table IV, the groups performing under racially segregated and racially mixed conditions did not differ significantly in mean performance scores when the bar hang was utilized as the motor task.

TABLE IV

ANALYSIS OF VARIANCE FOR PERFORMANCE SCORES OF CAUCASIAN, NEGRO, AND MIXED GROUPS PERFORMING THE BAR HANG

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F	P
Among	2	133.44	66.72	.32	N.S.
Within	111	23,158.52	208.64		
Total	113	23,291.96			

F needed at .05 level, 3.08; at .01 level, 4.80.
Mean Performance Score of the Caucasian Group, 34.69 seconds; Negro Group, 33.39 seconds and Mixed Group, 32.16 seconds.

ANALYSIS OF THE RELATIONSHIP OF PERFORMANCE AND ASPIRATION

Striking Power

A correlation coefficient of .98 was found to exist between the second performance scores and the second aspiration scores when the subjects in the Caucasian Group performed a measure of striking power. The correlation coefficient of the second performance scores and the second aspiration scores of the subjects in the Negro Group when performing a measure of striking power was .96. The correlation coefficient of the second performance scores and the second aspiration scores of the subjects in the Mixed Group when performing a measure of striking power was .97.

The correlation coefficient of the second performance scores and the second aspiration scores of all the subjects when performing a measure of striking power was .97.

As shown in Table V, each correlation coefficient was significant at the .01 level of confidence. It was evident that a high positive relationship existed between performance and aspiration when a measure of striking power was utilized as the motor task.

TABLE V

CORRELATIONS OF PERFORMANCE SCORES AND ASPIRATION SCORES OF SUBJECTS PERFORMING A MEASURE OF STRIKING POWER

Experimental Group	Degrees of Freedom	Correlation	P
Caucasian	36	.98	.01
Negro	36	.96	.01
Mixed	36	.97	.01
All Subjects	112	.97	.01

For 36 df, r needed for significance at the .05 level of confidence, .320; at .01 level, .413.
For 112 df, r needed for significance at the .05 level of confidence, .185; at the .01 level, .241.

Bar Hang

The correlation coefficient of the second performance scores and the second aspiration scores of the subjects in the Caucasian Group performing the bar hang was .98. The correlation coefficient of the second performance scores and the second aspiration scores of the subjects in the Negro Group performing the bar hang was .98. The correlation coefficient of the second performance scores and the second aspiration scores of the subjects in the Mixed Group performing the bar hang was .96.

The correlation coefficient of the second performance scores and second aspiration scores when all subjects performed the bar hang was .98.

As shown in Table VI, the correlation coefficient for performance scores and aspiration scores was significant at the .01 level of confidence when the motor task performed was the bar hang.

TABLE VI

CORRELATIONS OF PERFORMANCE SCORES AND ASPIRATION SCORES OF SUBJECTS PERFORMING THE BAR HANG

Experimental Group	Degrees of Freedom	Correlation	P
Caucasian	36	.98	.01
Negro	36	.98	.01
Mixed	36	.96	.01
All Subjects	112	.98	.01

For 36 df, r needed for significance at the .05 level of confidence, .320; at the .01 level, .413.
For 112 df, r needed for significance at the .05 level of confidence, .185; at the .01 level, .241.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of the study was to determine the influence of observers of the same race and a racially mixed audience on level of aspiration and gross motor performance of college males.

The study was conducted at the University of Southwestern Louisiana, Lafayette, Louisiana, during the Spring semester of 1970. Fifty-seven Caucasian and fifty-seven Negro undergraduate male students voluntarily participated in the study.

Three performance scores and two aspiration scores were obtained for each subject in one of the following group arrangements: (1) In the presence of nine other subjects and one tester of his own race; and (2) In the presence of a Mixed Group consisting of twelve to fourteen subjects, in which five Caucasian and five Negro subjects were tested by one Caucasian and one Negro tester.

The two motor tasks selected for this study were a measure of striking power and the bar hang. Subjects were advised that the purpose of the testing was to establish norms in striking power and the bar hang.

The subjects performed the prescribed motor tasks and the tester verbally informed each subject and the entire group of the scores made on each test. Each subject was then requested to verbally

indicate the expected score for his next performance in numerical deviation from his first performance. The subject performed and was again asked to indicate his prediction for the next trial in numerical deviation from his second performance. The second indication by the subject was followed by the third performance. The three performance scores and two aspiration scores for the measure of striking power, along with the first performance score and the first aspiration score for the bar hang, were obtained during the first testing period. The second performance score, the second aspiration score and the third performance score for the bar hang were obtained during the second testing period.

The aspiration discrepancy score was derived by dividing the second performance score into the second aspiration score and multiplying that quotient by 100. The second performance score and second aspiration score was used to determine the relationship between performance and aspiration.

The study was completed with thirty-eight subjects in the Caucasian Group, thirty-eight subjects in the Negro Group, and thirty-eight subjects in the Mixed Group. The Mixed Group was comprised of nineteen Caucasian and nineteen Negro subjects.

Analyses of variance were employed to determine whether there were significant differences in aspiration discrepancy scores and in performance scores among the three groups. The Pearson Product-Moment method of correlation was utilized to determine the relationship

between performance and aspiration for each group on both motor tasks.

FINDINGS

The findings of this study were as follows:

1. No significant differences were found between the aspiration discrepancy scores of the Caucasian, Negro and Mixed Groups when performing a measure of striking power.
2. No significant differences were found between the aspiration discrepancy scores of the Caucasian, Negro and Mixed Group when performing the bar hang.
3. No significant differences were found between the performance scores of the Caucasian, Negro and Mixed Groups when performing a measure of striking power.
4. No significant differences were found between the performance scores of the Caucasian, Negro and Mixed Groups when performing the bar hang.
5. When the second performance scores and second aspiration scores for striking power were correlated, a significant positive relationship was found in each group and in the total group.
6. When the second performance scores and second aspiration scores for the bar hang were correlated, a significant positive relationship was found in each group and in the total group.

Discussion of Findings

No significant differences were found in aspiration discrepancy scores among the groups in the performance of a measure of striking power and the bar hang under racially segregated and racially mixed conditions. Obviously, the subjects, regardless of the racial composition of their test group were equally adept in predicting future performance when utilizing a measure of striking power and the bar hang.

No significant differences were found in performance scores when the groups performed a measure of striking power and the bar hang under racially segregated and racially mixed conditions. Apparently, the subjects displayed almost equal ability when performing a measure of striking power and the bar hang, regardless of the racial composition of their test group.

The correlations between performance scores and aspiration scores of all subjects in striking power and the bar hang indicated that a significant positive relationship exists between a subject's ability to perform a motor task and his prediction of his performance on the next trial. Most of the subjects were realistic in estimating goals for future performances and, apparently, were not motivated to predict scores beyond observed capacity when members of the group, regardless of race, performed or aspired higher than the subject.

It is the opinion of the researcher that most of the subjects seemed to allow their own performance score, rather than the racial

make-up of the group, to influence aspiration scores. There was no difference in the performance scores of the groups, and no differences were found in the aspiration discrepancy scores of the groups in either motor task. The relationship between performance and aspiration for all groups was essentially uniform for both motor tasks.

The University of Southwestern Louisiana has been integrated for over fifteen years, and recently registered slightly over 500 Negro male students. The atmosphere on the campus appears to be one of friendliness toward all students, regardless of race, creed or nationality. It was felt by the author that the attitude which prevailed at the University of Southwestern Louisiana at the time of the study might have been largely responsible for the fact that race did not serve as a catalyst to precipitate significant differences in aspiration discrepancy scores. The investigator felt that if the study had been conducted several years earlier or perhaps at another institution, the results may have been different.

The researcher felt that perhaps the maturity level of the subjects could have been partially responsible for the fact that the racial composition of the groups did not act as an influencing factor. It was the opinion of the author and the testing assistant that the subjects did not seem to give any attention to the racial composition of their test group.

CONCLUSIONS

Within the limits of this study the following conclusions were made:

1. College males are not influenced by the racial composition of their test group to differ in their aspirations when performing gross motor tasks.
2. The racial composition of their test group does not influence college males to differ in their performance of gross motor tasks.
3. There is a highly significant positive relationship between a person's ability to perform a motor task and his ability to predict his score on the next trial of that task.

RECOMMENDATIONS

In light of this study, the following recommendations were made:

1. A study similar to this one conducted in a different geographical area with different age groups is needed.
2. Additional research investigating level of aspiration and performance of members of different races as participants in various racially mixed groups is needed.

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APPENDIXES

APPENDIX A

GROUP DATA SHEET FOR STRIKING POWER

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
1	22.5	24.5	25.5	27.5	27.0	108
2	14.5	16.5	20.5	22.5	18.0	110
3	21.0	24.0	18.5	23.5	22.5	127
4	18.5	20.0	21.0	23.0	24.0	110
5	10.5	13.5	14.5	16.5	19.0	114
6	15.5	16.5	16.0	18.0	23.5	113
7	30.0	31.0	31.0	31.0	35.5	100
8	18.5	19.5	19.5	21.5	18.0	110
9	19.5	21.5	22.0	23.0	21.0	105
10	17.5	18.5	17.5	18.5	18.0	106
11	8.0	11.0	11.0	12.0	11.0	109
12	16.0	17.5	22.5	22.5	25.5	100
13	14.5	16.5	15.0	16.0	14.5	107
14	13.5	16.5	22.5	24.5	23.5	109
15	30.5	32.0	33.0	36.0	29.5	109
16	17.0	20.0	22.0	24.0	24.5	109
17	18.5	19.5	18.0	19.0	17.5	106
18	18.5	20.5	23.5	24.0	21.5	102
19	18.5	21.5	18.5	20.5	17.0	111

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX A (continued)

GROUP DATA SHEET FOR STRIKING POWER

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
20	14.5	17.5	15.5	18.5	16.0	119
21	19.5	21.5	23.5	23.5	24.5	100
22	26.5	28.5	21.5	22.5	23.5	105
23	22.5	28.5	27.0	27.0	28.5	100
24	26.0	27.0	26.5	27.5	28.0	104
25	16.5	18.5	15.0	16.0	20.5	107
26	27.0	28.0	26.0	26.0	23.5	100
27	15.5	17.5	19.0	20.0	18.0	105
28	23.5	26.5	22.5	22.5	25.0	100
29	20.0	21.0	21.0	24.0	25.0	114
30	21.0	21.0	22.0	23.0	23.0	105
31	18.5	21.0	23.0	23.0	21.5	100
32	23.0	24.0	20.0	22.0	18.5	110
33	24.5	25.5	23.5	23.5	20.0	100
34	28.0	29.0	25.0	25.0	27.0	100
35	27.5	28.5	33.0	34.0	32.5	103
36	24.5	26.5	29.0	30.0	24.5	103
37	22.0	24.0	24.5	25.5	25.0	104
38	19.5	20.5	21.0	22.0	22.0	105

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX A (continued)

GROUP DATA SHEET FOR STRIKING POWER

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
39	30.0	28.0	26.0	30.0	24.5	115
40	20.5	17.5	20.0	20.0	18.5	100
41	15.5	19.5	24.0	27.0	23.0	113
42	19.0	19.0	17.5	18.5	21.0	106
43	13.0	20.0	14.5	15.5	15.0	107
44	27.0	29.0	25.0	27.0	26.0	108
45	29.0	29.0	31.0	31.0	25.0	100
46	27.5	29.5	22.0	24.0	22.5	109
47	28.0	29.0	30.0	29.0	28.0	97
48	14.0	18.0	19.5	22.5	24.0	115
49	31.0	36.0	34.5	37.5	33.5	109
50	28.0	31.0	35.0	37.0	31.0	106
51	24.0	29.0	23.5	25.5	26.0	109
52	19.0	21.0	20.0	21.0	18.5	105
53	33.5	36.5	33.5	34.5	28.0	103
54	21.5	23.5	18.5	21.5	16.0	116
55	18.5	22.5	22.5	24.5	28.5	109
56	13.0	18.0	17.5	19.5	20.5	111
57	8.0	13.0	13.0	16.0	11.5	123

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX A (continued)

GROUP DATA SHEET FOR STRIKING POWER

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
58	33.5	36.5	34.5	35.5	38.5	103
59	28.0	30.0	28.5	29.5	27.0	104
60	23.5	25.5	21.0	22.0	25.0	105
61	18.5	20.5	18.5	17.5	20.5	95
62	28.0	29.0	22.5	20.5	27.5	91
63	24.5	27.5	32.0	34.0	29.0	106
64	19.0	21.0	25.0	25.0	31.5	100
65	15.5	15.5	21.5	22.5	19.5	105
66	32.0	35.0	27.0	25.0	28.0	93
67	23.5	22.5	19.5	20.5	21.5	105
68	28.5	31.5	26.5	24.5	30.0	92
69	27.5	29.5	27.0	27.0	29.0	100
70	17.5	27.5	15.5	20.5	16.5	132
71	16.0	21.0	17.0	19.0	17.0	112
72	20.5	23.5	14.5	16.5	14.5	114
73	22.5	25.5	19.5	16.5	20.0	85
74	34.0	36.0	35.0	36.0	28.5	103
75	17.5	19.5	16.0	15.0	22.5	94
76	26.5	28.5	25.0	25.0	23.5	100

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX A (continued)

GROUP DATA SHEET FOR STRIKING POWER

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
77 N	27.5	30.5	32.5	32.5	27.5	100
78 N	20.5	18.5	16.0	16.0	21.0	100
79	14.0	16.0	21.5	23.5	24.0	109
80	14.5	16.5	25.0	26.0	26.0	104
81 N	32.5	35.5	30.0	33.0	31.0	110
82 N	28.5	30.5	30.0	30.0	25.0	100
83	33.5	35.5	27.0	27.0	25.5	100
84	23.0	30.0	21.5	24.5	21.0	114
85	16.0	17.0	18.0	19.0	21.5	106
86 N	14.5	15.5	18.5	18.5	18.5	100
87	18.5	20.0	25.0	26.0	23.0	104
88	19.0	21.0	24.5	25.5	27.0	104
89	29.0	28.0	29.0	29.5	34.0	102
90	20.5	21.5	21.0	21.0	19.5	100
91 N	18.5	20.5	18.0	18.0	15.5	100
92 N	23.5	24.5	28.5	29.0	27.0	102
93 N	24.0	26.0	19.0	20.0	17.5	105
94 N	25.5	26.0	26.0	26.0	30.0	100
95 N	14.5	17.5	17.0	18.0	16.5	106

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
N Negro Subjects in Mixed Group
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX A (continued)

GROUP DATA SHEET FOR STRIKING POWER

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
96	26.0	27.0	26.5	26.5	27.0	100
97	19.5	24.5	23.5	25.5	23.0	109
98 N	23.5	26.5	26.0	29.0	30.0	112
99	17.5	19.5	23.5	26.5	23.0	113
100 N	17.0	19.0	28.0	30.0	23.5	107
101 N	10.0	15.0	15.5	18.5	16.0	119
102 N	20.5	23.5	31.0	32.0	28.0	103
103	15.0	19.0	24.0	26.0	21.5	108
104	26.5	28.5	26.5	27.5	24.0	104
105	29.0	32.0	31.0	33.0	30.0	106
106 N	10.0	13.0	13.5	15.5	15.0	115
107 N	10.0	15.0	15.0	20.0	13.0	133
108	21.0	26.0	24.0	26.0	26.5	108
109 N	19.0	24.0	19.5	19.5	20.0	100
110	29.5	32.5	29.5	31.0	28.0	105
111	23.0	26.0	25.0	26.0	27.5	104
112	23.0	26.0	25.0	27.0	21.5	108
113 N	21.0	26.0	23.5	24.5	19.5	104
114 N	13.5	16.5	17.5	19.5	16.5	111

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
N Negro Subjects in Mixed Group
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX B

GROUP DATA SHEET FOR THE BAR HANG

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
1	39.9	50.4	47.5	49.5	39.0	104
2	28.8	34.8	26.3	29.3	24.3	111
3	13.2	20.2	8.8	10.8	10.3	123
4	29.2	34.2	31.3	34.3	25.5	110
5	22.8	27.8	26.8	30.0	23.2	112
6	52.0	60.0	48.0	50.0	43.0	104
7	29.0	31.0	28.0	30.0	27.5	107
8	15.2	20.2	15.7	18.2	14.5	116
9	20.8	25.8	23.5	24.5	24.9	104
10	34.5	39.5	37.7	37.7	36.0	100
11	38.0	42.0	35.7	35.7	31.3	100
12	32.7	36.7	36.2	36.2	30.5	100
13	34.0	40.0	34.0	35.0	28.8	103
14	31.6	36.6	33.1	33.1	30.3	100
15	44.0	54.0	43.0	37.0	38.8	86
16	38.1	43.1	37.8	39.8	33.2	105
17	55.0	57.0	56.7	54.7	49.8	96
18	34.2	40.2	32.0	35.0	27.0	109
19	31.0	36.0	35.0	32.0	27.5	91

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX B (continued)

GROUP DATA SHEET FOR THE BAR HANG

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
20	28.5	33.5	26.1	21.1	22.3	81
21	21.2	23.2	20.6	18.6	16.8	90
22	50.9	54.9	48.8	52.8	50.5	108
23	22.5	30.5	24.2	23.2	28.0	96
24	6.6	10.6	10.2	9.2	7.5	90
25	39.7	44.7	39.0	39.0	42.5	100
26	30.3	35.3	24.5	24.5	24.1	100
27	41.0	47.0	43.0	40.0	39.4	91
28	24.7	29.7	26.7	24.7	23.0	93
29	36.5	40.5	35.3	35.3	33.2	100
30	30.0	40.0	44.0	44.0	41.9	100
31	42.1	49.1	43.9	42.9	39.6	98
32	48.1	43.1	48.3	43.3	46.0	90
33	48.4	50.4	45.2	46.2	41.0	102
34	53.5	56.5	51.6	52.6	47.5	102
35	30.0	31.0	29.5	30.5	23.6	103
36	45.9	45.0	51.5	51.5	44.2	100
37	28.0	31.0	29.1	28.1	25.6	97
38	38.4	42.4	39.6	39.6	35.5	100

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX B (continued)

GROUP DATA SHEET FOR THE BAR HANG

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
39	5.0	10.0	6.3	8.3	5.2	132
40	13.0	18.0	25.0	25.0	21.3	100
41	37.5	42.5	43.5	48.5	32.5	111
42	41.5	44.5	58.5	58.5	48.5	100
43	37.5	40.0	32.2	35.2	30.8	109
44	56.0	60.0	75.0	77.0	67.0	103
45	21.0	23.0	20.8	22.8	24.2	110
46	15.0	17.0	19.2	20.2	19.2	105
47	44.5	45.5	39.5	40.5	38.9	103
48	7.5	17.5	11.0	13.0	8.5	118
49	57.3	60.3	62.2	70.2	54.7	113
50	14.7	15.7	18.5	20.5	17.6	111
51	40.0	65.0	32.2	34.2	27.5	106
52	52.5	60.5	36.3	38.3	32.2	106
53	36.2	41.2	41.8	41.8	39.0	100
54	18.4	25.4	20.0	22.0	20.5	110
55	30.5	35.5	36.6	38.6	32.9	105
56	30.2	40.2	15.3	15.3	16.0	100
57	31.5	36.5	36.8	41.8	32.8	114

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX B (continued)

GROUP DATA SHEET FOR THE BAR HANG

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
58	23.5	43.5	26.5	30.5	35.5	115
59	36.2	50.2	39.7	37.7	48.8	95
60	30.2	33.2	29.8	30.8	33.3	103
61	13.5	18.5	12.5	13.5	27.7	108
62	46.2	49.2	33.8	30.8	30.8	91
63	49.5	59.5	51.5	54.5	40.8	106
64	33.6	38.6	32.7	36.7	24.4	112
65	35.8	35.8	43.8	41.8	32.6	95
66	20.5	22.5	21.0	21.0	18.2	100
67	45.5	46.5	49.8	50.8	43.5	102
68	4.8	9.8	7.7	9.7	15.8	126
69	38.2	46.2	44.4	49.4	42.3	111
70	49.0	54.0	30.3	30.3	36.7	100
71	26.0	31.0	21.5	24.5	19.1	114
72	63.5	70.5	74.5	64.5	65.0	87
73	35.5	40.5	36.8	34.8	34.2	95
74	22.5	22.5	37.0	37.0	38.0	100
75	13.8	12.8	13.0	11.0	20.4	85
76	11.0	9.0	15.3	9.3	12.8	61

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX B (continued)

GROUP DATA SHEET FOR THE BAR HANG

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
77 N	9.3	21.3	14.0	16.0	12.5	114
78 N	0.5	0.4	0.8	0.6	0.3	74
79	19.0	27.0	18.0	20.0	13.5	111
80	34.5	44.5	43.7	48.7	42.8	111
81 N	21.5	31.5	18.8	20.8	21.0	111
82 N	11.0	22.0	15.0	15.0	16.0	100
83	26.0	34.0	21.5	24.5	30.8	114
84	18.0	23.0	22.3	24.3	22.0	109
85	29.2	39.2	30.0	26.0	24.5	87
86 N	26.0	29.0	23.8	23.8	28.3	100
87	41.4	51.4	46.0	36.0	39.0	78
88	57.4	67.4	58.4	58.4	47.7	100
89	14.0	29.0	18.5	18.5	19.0	100
90	37.0	43.0	43.0	41.0	36.8	95
91 N	55.1	67.1	59.0	54.0	63.5	92
92 N	19.8	29.8	29.4	34.4	31.3	117
93 N	30.5	38.5	29.3	24.3	30.1	83
94 N	40.7	45.7	50.1	50.1	51.6	100
95 N	26.0	38.0	24.0	24.0	18.0	100

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
N Negro Subjects in Mixed Group
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

APPENDIX B (continued)

GROUP DATA SHEET FOR THE BAR HANG

Subject	1P*	1A*	2P*	2A*	3P*	2AD*
96	9.0	29.0	27.5	27.5	25.1	100
97	42.5	44.5	46.0	49.0	38.0	107
98 N	2.5	3.5	1.0	2.0	1.0	200
99	39.5	43.5	39.2	40.2	34.0	103
100 N	30.8	40.8	34.6	38.6	34.4	112
101 N	46.8	48.8	46.8	48.8	35.2	104
102 N	45.8	47.8	40.9	43.9	40.5	107
103	44.9	46.10	28.2	44.2	30.2	157
104	17.2	20.2	19.8	21.8	18.8	110
105	38.9	44.10	42.9	45.9	42.0	107
106 N	17.8	27.8	31.7	36.7	29.0	116
107 N	24.8	30.8	38.7	33.7	28.9	87
108	44.6	59.6	45.6	50.6	46.5	109
109 N	22.9	28.9	21.2	21.2	21.8	100
110	54.9	61.9	55.4	55.4	48.0	100
111	11.5	31.5	30.0	30.0	29.7	100
112	24.3	29.3	29.0	29.0	25.4	100
113 N	44.3	44.3	26.7	27.7	23.5	104
114 N	47.5	54.5	48.5	51.5	40.0	106

1P First Performance Score
1A First Aspiration Score
2P Second Performance Score
N Negro Subjects in Mixed Group
2A Second Aspiration Score
3P Third Performance Score
2AD Second Aspiration Discrepancy Score

VITA

Edmond Anthony Dugas was born August 27, 1940 in Evergreen, Louisiana. He received his elementary and secondary school education at Evergreen High School, graduating from there in 1958. The author received a Bachelor of Science degree in Physical Education in 1962 and a Master of Education degree in 1963, both from the University of Southwestern Louisiana, Lafayette.

He taught physical education and coached varsity sports at Welsh High School and Port Allen High School in Louisiana prior to accepting a position in the Men's Physical Education Department at the University of Southwestern Louisiana in 1967.

During the 1968-69 school year the author was on leave from Southwestern. He served in the capacity of Visiting Lecturer at the Louisiana State University Laboratory School with responsibilities in elementary physical education and varsity sports. The author is presently teaching in the Men's Physical Education Department at Southwestern.

In January, 1962 the author married the former Marilyn Bordelon, and they have four children.

He has co-authored one article entitled "Professional Tips for Future Coaches" published in the December, 1968 issue of Louisiana Schools.

EXAMINATION AND THESIS REPORT

Candidate: Edmond A. Dugas

Major Field: Physical Education

Title of Thesis: The Influence of Observers of the Same Race and a Racially Mixed Audience on Level of Aspiration and Gross Motor Performance of College Men

Approved:

Mary L. Life
Major Professor and Chairman

Mary Goodrich
Dean of the Graduate School

EXAMINING COMMITTEE:

F. A. Drury

Ralph E. Steben

Jack K Nelson

J. Greenleaf

Date of Examination:

July 22, 1970